IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of determining whether a sampled cardiac signal is noisy, the method including:

determining whether an evaluation sample of the cardiac signal is a turning point with respect to previous and subsequent samples;

counting a number of the turning points over a predetermined plurality of cardiac samples; and

deeming a window that includes the predetermined plurality of cardiac samples to be noisy if the number of turning points exceeds a threshold value, in which the threshold value includes a majority threshold value and a quorum threshold value.

2. (Original) The method of claim **1**, in which the determining whether the evaluation sample of the cardiac signal is a turning point includes:

determining first and second directions of the cardiac signal preceding and following the evaluation sample, respectively; and

deeming the evaluation sample to be a turning point if the first direction is different from the second direction.

3. (Original) The method of claim **2**, further including deeming the evaluation sample to be other than a turning point if at least one of the first and second directions manifests a slope of a magnitude that is less than a threshold value.

4. (Original) The method of claim **1**, in which the determining whether the evaluation sample is a turning point is carried out at a frequency that is different from a sampling frequency.

5. (Original) The method of claim **1**, further including setting a noise flag if the window is deemed noisy.

6. (Currently Amended) The method of claim **1**, further including, if the cardiac signal is deemed noisy, at least one of:

adjusting ~~the~~ a detecting of the cardiac signal; and

adjusting a response to the detecting of the cardiac signal.

7. (Cancelled)

8. (Original) The method of claim **1**, in which the previous sample is taken at a first predetermined number of periodic samples away from the evaluation sample and the subsequent sample is taken at a second predetermined number of periodic samples away from the evaluation sample.

9. (Original) The method of claim **8**, in which the first and second predetermined number are equal.

10. (Original) The method of claim **8**, in which the first and second predetermined number are varied over a range.

11. (Original) The method of claim **1**, in which the previous and subsequent samples respectively immediately precede and immediately succeed the evaluation sample.

12. (Original) The method of claim **1**, further including:

counting a number of windows deemed noisy; and

setting a noise flag if the number of windows deemed noisy exceeds a window threshold value.

13. (Currently Amended) A method including:

(a) detecting a cardiac signal from electrodes associated with a heart;

(b) sampling the cardiac signal periodically to obtain a sampled cardiac signal x(n);

(c) determining, for each sample, TP = sign{x(*i*)-x(*i*-K)}*sign{x(*i*+K)-x(*i*)}, in which x(*i*) is the *i*th sample of the sampled cardiac signal x(*n*), and in which K is an integer offset, and in which TP = -1 is used as at least one factor indicating that x(*i*) is a turning point; and

(d) deeming the cardiac signal to be noisy if a number of turning points occurring during a fixed number of samples preceding x(*i*) exceeds a threshold value, in which the threshold value includes a majority threshold value and a quorum threshold value.

14. (Original) The method of claim **13**, in which if |x(*i*)-x(*i*-K)| is less than a first threshold or |x(*i*+K)-x(*i*)| is less than a second threshold, then x(*i*) is deemed to be not a turning point.

15. (Original) The method of claim **13**, in which K=1.

16. (Withdrawn) The method of claim **13**, further including varying K between different values, and carrying out (c) and (d) at the different values of K.

17. (Original) The method of claim **13**, further including setting a noise flag if the window is deemed noisy.

18. (Original) The method of claim **13**, further including, if the cardiac signal is deemed noisy, at least one of:

adjusting the detecting the cardiac signal; and

adjusting a response to the detecting the cardiac signal.

19. (Original) The method of claim **18**, in which the adjusting the detecting the cardiac signal includes at least one of adjusting a gain, adjusting a sensitivity threshold, adjusting a frequency selectivity, switching an electrode from which the cardiac signal is sensed, and corroborating sensed depolarizations with another cardiac signal detected from a different electrode.

20. (Cancelled)

21-42. (Cancelled)

43. (New) The method of claim 5, further including changing the threshold value from the majority threshold value to the quorum threshold value upon the setting the noise flag.

44. (New) The method of claim 5, in which the majority threshold value is a larger magnitude than the quorum threshold value.

45. (New) The method of claim 1, further including clearing a noise flag.

46. (New) The method of claim 45, further including establishing the threshold value at the majority threshold value upon the clearing the noise flag.

47. (New) The method of claim 46, in which the majority threshold value is a larger magnitude than the quorum threshold value.

48. (New) A method of determining whether a sampled cardiac signal is noisy, the method including:

determining whether an evaluation sample of the cardiac signal is a turning point with respect to previous and subsequent samples;

counting a number of the turning points over a predetermined plurality of cardiac samples; and

deeming a window that includes the predetermined plurality of cardiac samples to be noisy if the number of turning points exceeds a threshold value, in which the threshold value includes a first threshold value and a second threshold value, wherein the first threshold value is of larger magnitude than the second threshold value;

setting a noise flag if the window is deemed noisy;

clearing the noise flag if the window is deemed not noisy;

setting the threshold value at the first threshold value upon setting the noise flag; and

setting the threshold value at the second threshold value upon clearing the noise flag.

49. (New) A method including:

detecting a cardiac signal from electrodes associated with a heart;

sampling the cardiac signal periodically to obtain a sampled cardiac signal x(n);

determining, for each sample, TP = sign{x(*i*)-x(*i*-K)}*sign{x(*i*+K)-x(*i*)}, in which x(*i*) is the *i*th sample of the sampled cardiac signal x(*n*), and in which K is an integer offset, and in which TP = -1 is used as at least one factor indicating that x(*i*) is a turning point; and

deeming the cardiac signal to be noisy if a number of turning points occurring during a fixed number of samples preceding x(*i*) exceeds a threshold value, in which the threshold value includes a first threshold value and a second threshold value, wherein the first threshold value is of larger magnitude than the second threshold value;

setting a noise flag if the window is deemed noisy;

clearing the noise flag if the window is deemed not noisy;

setting the threshold value at the first threshold value upon setting the noise flag; and

setting the threshold value at the second threshold value upon clearing the noise flag.

50. (New) A method of determining whether a sampled cardiac signal is noisy, the method including:

determining whether an evaluation sample of the cardiac signal is a turning point with respect to previous and subsequent samples;

counting a number of the turning points over a predetermined plurality of cardiac samples; and

deeming a window that includes the predetermined plurality of cardiac samples to be noisy if the number of turning points exceeds a threshold value that provides hysteresis.

51. (New) A method including:

detecting a cardiac signal from electrodes associated with a heart;

sampling the cardiac signal periodically to obtain a sampled cardiac signal x(n);

determining, for each sample, TP = sign{x(*i*)-x(*i*-K)}*sign{x(*i*+K)-x(*i*)}, in which x(*i*) is the *i*th sample of the sampled cardiac signal x(*n*), and in which K is an integer offset, and in which TP = -1 is used as at least one factor indicating that x(*i*) is a turning point; and

deeming the cardiac signal to be noisy if a number of turning points occurring during a fixed number of samples preceding x(i) exceeds a threshold value that provide hysteresis.